VALVE SEAT LEAK DETECTING DEVICE

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Abstract of **JP1187430**

PURPOSE:To enable high-accuracy leak detection by providing an acoustic sensor for background noise BGN measurement to piping on the upstream and downstream sides of a valve and detecting the difference between the output of this sensor and the output of the acoustic sensor provided to the valve. CONSTITUTION:An acoustic sensor 3 is provided to the valve 1 or its nearby piping, the acoustic sensor 3a for BGN measurement which has the same characteristics with the sensor 3 is provided to the upstream-side piping 2a, and an acoustic sensor 3b is provided to the downstream-side piping 2b. The detection signals of the sensors 3, 3a, and 3b are amplified and filtered by signal processors 4, 4a, and 4b and the signals from the sensors 3a and 3b are converted by amplifiers 8a and 8b into 1/2 signals. Then the difference among the signals from the sensor 3 and sensors 3a and 3b is guided to a leak decision device 5 as a leak signal 9. Therefore, when there is no leak in the seat part of the valve 1, the signal 9 becomes '0' and when there is a leak, the output of the sensor 3 increases, the influence of the leak upon the sensors 3a and 3b is small, and the signal 9 consists of almost only an acoustic output due to the leak.